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(74) Agents: **BORG, Keith, Joseph** et al.; Halford & Co, 1
Market Street, Sydney, New South Wales 2000 (AU).

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(71) Applicant (for all designated States except US): **ROCHE
MINING (MT) PTY LIMITED** [AU/AU]; 11 Elysium
Road, Carrara, Queensland 4211 (AU).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SELVEY, Bruce,
Albert** [AU/AU]; 3 Penelope Place, Benowa, Queensland
4217 (AU). **KRUGER, Johannes, Arnoldus** [ZA/AU];
6 Malita Place, Pacific Pines, Queensland 4211 (AU).
PALMER, Mark, Kenneth [AU/AU]; 30 Horizon Av-
enue, Ashmore, Queensland 4214 (AU). **BORG, Keith,
Joseph** [AU/AU]; 47 Hydrae Street, Revesby, New South
Wales 2212 (AU).

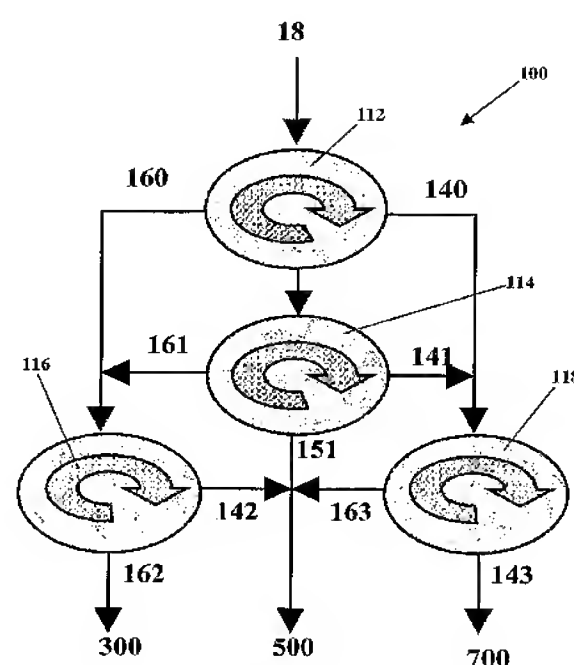
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(54) Title: A MINERAL SEPARATION PLANT DEVICE



(57) Abstract: The present invention provides an electrostatic separation device to separate components of a mixture of particulates, said device including a means to electrostatically charge said particulates and a first roll and a second roll which are conductive, said first and second roll being arranged one above the other, said device including third and fourth rolls which are also conductive, said first and second rolls each producing a non-conductive output and conductive output, which proceeds respectively to said third roll and said fourth roll, with said first and second rolls producing a mids output, said mids output from said first roll proceeding onto said second roll. The present invention also provides a method of separating particulates from a mixture of particulates, said method including the steps of electrostatically charging said particulates and passing same over a first and second rolls which are conductive, whereby the non-conductive output and conductive output of said first roll bypasses said second roll, said second roll processing only the mids output from said first roll. The present invention also provides a separation plant having such a device or utilising such a method. The present invention further provides an electrostatic and magnetic mineral separation device having a roll onto which a feed of particulate to be separated can be introduced, said roll including a magnetic means associated therewith to allow magnetic forces to act on said particulates and thereby attract said particulates to said roll, said roll also being conductive and said device including a means to electrostatically charge said particulates so that conductive particulate is removed from said roll before non conductive particulate.

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